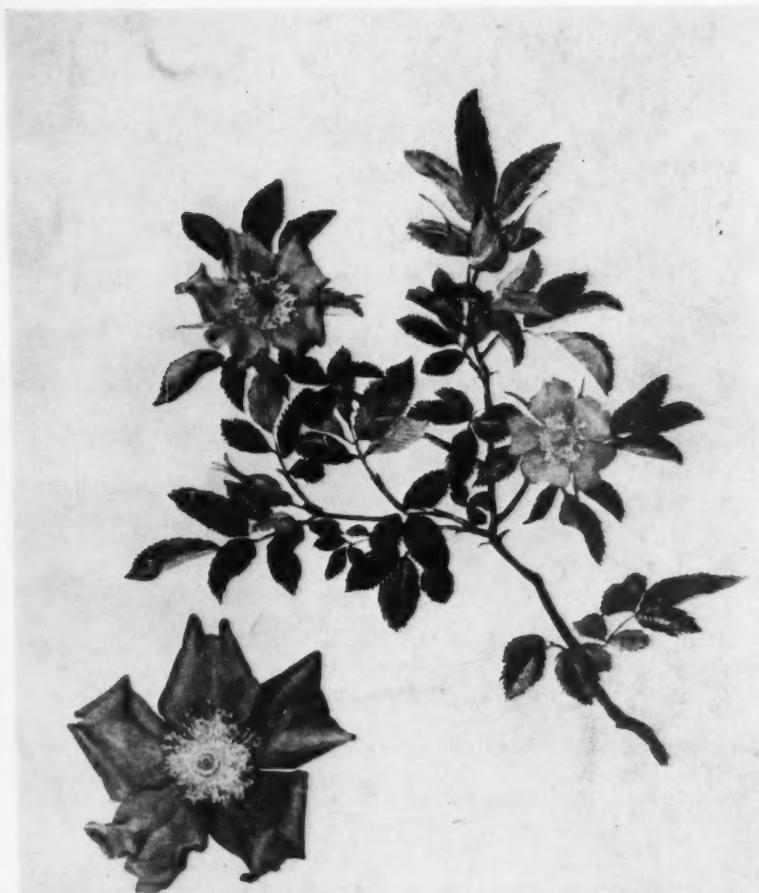


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CARNEGIE

Magazine



UNIVERSITY OF MICHIGAN
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SWAMP ROSE

June 1951

25 cents

The Economy of Egypt



Cat mummy in the collection of the Carnegie Museum

AMONG THE MANY CURIOSITIES to come out of Egypt are the mummies of cats, which have been found in large numbers particularly in the ruins of Bubastis.

Egypt's veneration of cats undoubtedly arose from their importance in defending the granaries from rats. Since the country's economy was primarily agricultural—being based on corn, barley and wheat—the cat stood between the people and starvation.

The simplicity of this economy—in which cats could play so important a role—was reflected in the primitive nature of early Egyptian banking. The priests stored the community's supply of precious metals and made the few necessary loans.

As more complex civilizations arose, the functions of banking gradually expanded and banks developed new services to meet new needs. Today's banks with their manifold services thus represent a direct response to the financial requirements of modern society.

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Calendar of Events

CARNEGIE INSTITUTE

4400 FORBES STREET, PITTSBURGH 13, PENNSYLVANIA
WEEKDAYS 10:00 A.M. TO 5:00 P.M.; SUNDAYS 2:00 TO 6:00 P.M.
CAFETERIA OPEN FOR VISITORS TO THE BUILDING
LUNCHEON 11:00 A.M. TO 2:00 P.M., WEEKDAYS
SNACK BAR: 2:00 TO 5:00 P.M., WEEKDAYS

CARNEGIE LIBRARY OF PITTSBURGH

WEEKDAYS 9:00 A.M. TO 9:00 P.M.
REFERENCE SERVICES UNTIL 10:00 P.M., WEEKDAYS
SUNDAYS 2:00 TO 6:00 P.M., REFERENCE SERVICES ONLY
Institute and Library open to the public every day without charge

IN THE ART GALLERIES

INDEX OF AMERICAN DESIGN. One hundred water-color renderings selected from the studies of American folk art produced under the Federal Art Project during the '30s will be exhibited on the balcony of the Hall of Sculpture from June 17 through July 8.

CARNEGIE TECH FACULTY EXHIBIT. Painting and design, sculpture and crafts by Tech faculty members in the College of Fine Arts remain on display through June 11, on the second floor.

PERMANENT COLLECTION. The development of painting in the United States—from West and Stuart, through Homer, Ryder, Eakins, Whistler, and Sargent, to Weber, du Bois, Burchfield, Speicher, and Marsden Hartley—may be viewed in galleries A, B, and C, second floor. In the same galleries also are regularly exhibited examples of European art by Monet, Sisley, Pissarro, Orpen, Carena, Zorn, Puvis de Chavannes, Solana, Derain, Lavery, and Rouault.

IN THE SCIENCE HALLS

BIRDS FROM HONDURAS. Colorful specimens of bird life collected by Arthur W. Twomey on his recent field trips to Central America, with a new mural by Ottmar F. von Fuehrer, are on display in Bird Hall.

CURRENT EXPEDITIONS DISPLAY. Specimens collected during recent Museum field work, on projects that are being carried further this summer, may be seen on the first floor. These include archeological finds from Qataban in southern Arabia; vertebrate fossils from Wyoming; fossil mammals from Bradford County, Pennsylvania; and Indian artefacts from western Pennsylvania.

SWAMP ROSE

*I sing of Spring, flower crowned,
I sing the praises of the Rose.
Friend, aid me in my song.
The Rose is the perfume of the Gods,
the joy of men. . . .
Ah! What should we do without Roses?
The poets would have lost their rosy-
fingered dawn
The nymphs their arms and Venus her blush. . . .
It defies the hand of time and is lovely
in its old age
As it keeps for ever its first perfume.*

—ANACREON (Fifth Century B.C.)

The swamp rose (*Rosa palustris*) on the cover is from one of two hundred exquisite water colors painted by former museum director Andrey Avinoff. These will be reproduced in natural color and size, with appropriate text, as Volume II of *Wildflowers of Western Pennsylvania and the Upper Ohio Basin*.

This de luxe standard work, sponsored very generously by The Buhl Foundation and published jointly by the University of Pittsburgh Press and the Carnegie Museum, is now in process and is expected to appear late in 1952.

Volume I of the two-volume work, written by O. E. Jennings, director emeritus of Carnegie Museum, will be devoted to the ecology, distribution, keys, and descriptions of the approximately twenty-five hundred different kinds of flowering plants that grow wild in our region.

BEQUESTS—In making a will, money left to Carnegie Institute, Carnegie Institute of Technology, or Carnegie Library of Pittsburgh should be covered by the following phrase: I do hereby give and bequeath to (Carnegie Institute) or (Carnegie Institute of Technology) or (Carnegie Library of Pittsburgh) in the City of Pittsburgh, Pennsylvania. . . . Dollars

MEMORIALS—Carnegie Institute is prepared to receive contributions given by friends in memory of deceased persons in lieu of floral tribute, and to notify the deceased's family of such gift. The amount of the contribution will not be specified unless requested by the donor.

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IN TRUST INVESTMENTS

We strive to be alert to changing world and domestic conditions, recognizing that new developments often call for new judgments.

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WILLIAM B. MCFALL, President

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EXHIBITS IN TRANSITION. Bird Hall is being remodeled and redecorated, and construction of the new Hall of Mammal Evolution moves steadily ahead.

TEMPORARY EXHIBITS. The annual News Pix Salon of Pittsburgh newspaper photographers continues into July; From the Land of the Dragon, a showing of rich fabrics and costumes of the Manchu period, and American Indian Handicrafts may be seen through the summer.

PERMANENT FEATURES. Dinosaur Hall, Fossil Hall, Hall of North American Mammals, Botany Hall, the Heinz and DuPuy Collections, the Douglas Stewart Memorials, Transportation Exhibit.

SUNDAY ORGAN RECITALS

Marshall Bidwell will present his hour recital on the great organ in Music Hall each Sunday at four o'clock through June, then discontinue until October. The recitals are sponsored by the Arbuckle-Jamison Foundation.

FOR THE YOUNGSTERS

The Outdoor Sketching Class, the Junior Naturalists, and the Library Story Hour, all available for boys and girls without charge, will again be held this summer, beginning in July. Telephone MAYflower 1-7300 for information about the schedule.

FRENCH PAINTING: 1100-1900

The Founder's Day exhibition for 1951, FRENCH PAINTING: 1100-1900, will serve, in part at least, to answer the statement in the *Atlantic Monthly* for May that the cultural development of Pittsburgh has been neglected.

There will be a series of late afternoon talks in the four or five weeks preceding the opening of the exhibition by Gordon Bailey Washburn, director of

fine arts and the organizer of the show. The dates, time, and sponsorship of these talks will be announced later.

On October 28, in the series of Tuesday evening talks in the Music Hall under the Division of Education, Mr. Washburn will give an illustrated lecture on the exhibition, and on Tuesday evening, November 13, in the same series, a talk will be given by an authority on French art.

On one of the Sunday afternoons during the show, John Walker, chief curator of the National Gallery of Art, will also discuss the exhibition, in Lecture Hall.

During the period of the show, October 18 through December 2, the Division of Education will arrange talks on French art and guidance through the galleries for groups and clubs, on request.

In preparing for the exhibition, the following books are recommended, the first three being general and the last three covering definite periods of French art. All may be found at the Carnegie Library of Pittsburgh.

An Account of French Painting by Clive Bell
Charto and Windus, London, 1931

French Painting by R. H. Wilenski
Charles T. Branford Company, Boston, 1949

The Story of French Painting by Charles H. Caffin
Century Company, New York, 1915

French XVIII Century Painters by Edmond and Jules de
Goncourt
Phaidon Publishers, Inc., New York, 1948

The History of Impressionism by John Rewald
Museum of Modern Art, New York, 1946

French Painting in the 14th, 15th and 16th Centuries by
Louis Réau

The Hyperion Press, New York, 1939

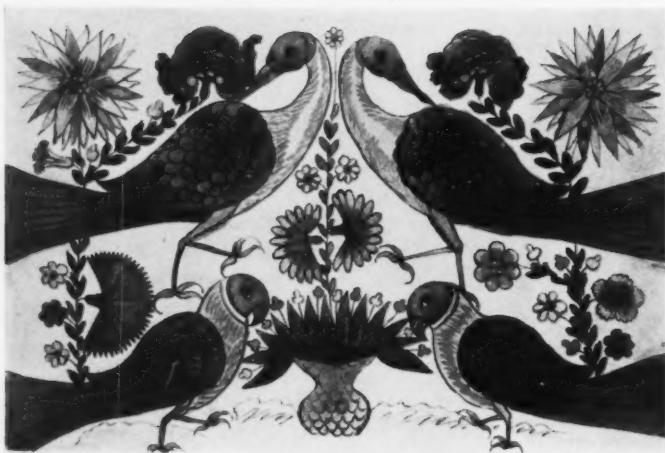


NEW MEMPHIS-ARKANSAS BRIDGE. The giant cantilever bridge, nearly a mile long, that now spans the broad Mississippi at Memphis, has two 24-foot roadways of concrete-filled U.S.S. I-Beam-Lok Steel Flooring. This type of bridge flooring goes in quickly and easily. It's light in weight, very strong. And it provides a safe, skid-resistant, fireproof, smooth-riding surface. Only steel can do so many jobs so well!



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Albert Levone

HAND-DRAWN PATTERN, AS FOR A CHEST DECORATION (late 1700s, Pennsylvania)

INDEX OF AMERICAN DESIGN

Exhibition at the Institute June 17 through July 8

THE year 1950 marked the fifth anniversary of the Index of American Design at the National Gallery of Art and also the publication of what is held to be the most important, complete, and beautiful book on American folk art ever issued, *The Index of American Design*.

To celebrate the latter event, the National Gallery prepared an exhibition of one hundred water-color renderings selected by Erwin O. Christensen, curator of the collection at the National Gallery, from the three hundred and seventy-eight finest examples used as illustrations in the book. The exhibition will be at Carnegie Institute until July 8, installed on the balcony of the Hall of Sculpture. There is a copy of the book, *The Index of American Design*, in the exhibition, and the volume may be purchased at the Art and Nature Shop, Carnegie Institute.

That "good may come out of Nazareth" is established once again by this exhibition. Its genesis is interesting and instructive. The United States Government, during the Depression, provided for a number of projects for the employment of artists. One of the Federal Art Projects was the Index

of American Design. It had two purposes: to provide employment that would preserve the skills and ability of artists, and to create in permanent form before it vanished a record of the folk art and early crafts of America. The work of the project was carried on in thirty-five states. Important discoveries were made in fields that had been neglected or overlooked. The function of the project was the pictorial recording of the "articles in daily use in this country from the early Colonial times to the close of the nineteenth century," the product of our native crafts, of our popular and folk art. During the seven years, 1935 to 1942, some fifteen thousand finely executed paintings were made, and this unparalleled collection from all parts of the country is now housed in the National Gallery of Art at Washington.

A somewhat similar but more limited project was carried out in England, beginning in 1940, under a Pilgrim Trust grant. The paintings and drawings of historic and notable structures are reproduced in four volumes, *Recording Britain*, Oxford University Press, 1946-49. The secretary of the committee administering

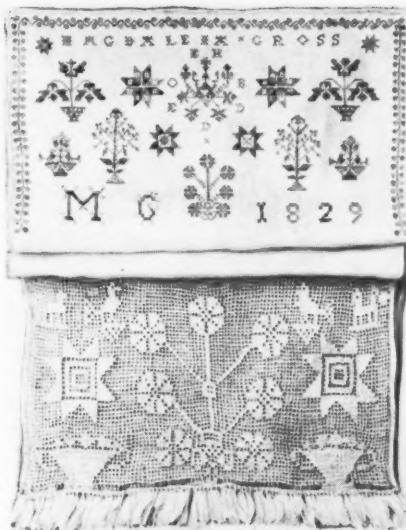
the fund, and the editor of the publication was Arnold Palmer, the representative in England of Carnegie Institute.

The exhibition, limited as it has to be, reflects the great wealth of creative design that is the common denominator of our folk arts and crafts. The show in itself, as the Index as a whole, in the words of Holger Cahill, who was the national director of the Federal Art Project and an acknowledged expert on American folk art, "brings together thousands of particulars from various sections of the country, tells the story of American hand skills and traces intelligible patterns within that story. In documenting the forms created by the tastes, skills, and needs of our ancestors it brings a new vitality and warmth into their everyday history. . . ."

The examples of folk art in the exhibi-



John Matulis
WOOD CARVING FOR A CIRCUS WAGON
(c. 1890, Connecticut)



Frances Lichen
EMBROIDERED SHOW TOWEL (1829, Pennsylvania)

tion give evidence of how the early craftsmen combined the artistic with the practical. Here are metal weathervanes, tavern signs, fascinating ship figureheads (as the Commodore Perry), Cigar Store Indians, Conestoga wagons, decorated bootjacks, rocking chairs, foot warmers, and many other objects used in the home. Then there are examples of Pennsylvania-German-Dutch colorful decorative art, Spanish-Colonial religious art, carved animals, glass, elaborate coverlets and spreads, and decorated Bible boxes. And in the exhibition are pictures of Shaker furniture of simple and austere design, Chippendale desks, corner cupboards, and Empire chairs. These reveal the traditional influence that endures to the present day.

As indicated by the water-color renderings in the show, the Federal Art Project insisted upon strict objectivity, accurate drawing, exact proportions, and faithful rendering of material, color, and texture, so that each drawing would stand as a true representation of the object. There was achieved a consistency of style that was the result of a standard set of procedures for the artists, and yet many of the works, while maintaining complete fidelity to the objects portrayed, have the individuality which characterizes works of art.



**she was trapped by
a wall of words**

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From Our 88 Years' Experience*

She had lived comfortably for years on the income from the trust her husband had established. Then failing health necessitated heavy medical expenses far exceeding her income. Although there were ample funds in the trust, *not one penny of the principal could be used*—because the trust agreement stipulated the payment of income only. How unfortunate that such needs were not anticipated!

In planning an estate it pays to utilize the services of expert advisers. Our Trust Officers can provide the experience so valuable in setting up a plan to provide the proper latitude—so that an estate can be administered efficiently under any conditions. To make sure your true intentions will be carried out, why not discuss your estate problems with us— together with your husband and your attorney? Visit us, or telephone GR 1-9600, extension 669.



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In the one hundred renderings, there are only four from Pennsylvania: a water color on paper (here reproduced)—may have been pattern for a chest decoration—by Heinrich Otto about the last quarter of the 18th century, the original of which is in the Philadelphia Museum; a Show Towel (reproduced) made in 1829 by Magdalena Gross, also owned by the Philadelphia Museum; a Quaker doll made about 1865, which is now in the Pennsylvania Historical Society; and a box with sliding top made in 1777, now owned by the Barnes Foundation at Merion, Pennsylvania. Pennsylvania, in the eastern and central parts of the Commonwealth, was particularly rich in folk art and is to this day. This developed out of the various German religious communities in the state, just as the folk art, mostly religious, of the Southwest grew out of the Spanish settlements.

It would appear that western Pennsylvania in the early days neglected the arts, as it does the art-crafts today in the midst of mass production of raw materials. It may well be, however, that the Art Project did not function in this particular field in this district. There are still notable ex-

amples of folk art in western Pennsylvania. Witness the statue of Lafayette carved in wood by David Blythe that now stands in the rotunda of the Court House at Uniontown, and the multitude of art-craft objects of utility at Economy. There are many other specimens of folk art in western Pennsylvania which should be recorded soon, for it is later than one thinks.

It is hoped that through this exhibition and similar ones the aims of the late Constance Rourke, a great student of American culture, may come to fruition, for she wrote: "Not the least of the revelations of the Index may be those offered to the student of American social history. Fresh light may be thrown upon ways of living which developed within the highly diversified communities of our many frontiers, and this may in turn give us new knowledge of the American mind and temperament. Finally, if the materials of the Index can be widely seen they should offer an education of the eye, particularly for young people, which may result in the development of taste and a genuine consciousness of our rich national inheritance."

—J. O'C., JR.

THEY PRACTICE WHAT THEY TEACH

BY JEANETTE JENA



THERE'S that old cliché about wanting to work on a newspaper "because you meet such interesting people," which seems to me can be applied more pertinently to many other groups in our heterogeneous city. For a big industrial town like Pittsburgh has an unfortunate way of working and playing in separate compartments; and the versatile men and women who make up our college faculties, for example, are known to only a small part of the community.

But now comes a show by Carnegie Tech's teachers of fine arts, to open a whole series of windows into those so-called ivory towers! Twenty members of the painting and design department at the invitation of Carnegie Institute are exhibiting their extracurricular work—a variety of personalities of different ages and philosophies demonstrating that they practice what they teach.

Much has been written, of course, about Tech's new approach to education in the various engineering schools; about the emphasis on the whole man instead of the parts of the machine, and his functioning as a citizen of the world. Less has been heard, perhaps, about the workings of the other departments; so this stimulating art exhibition may come as a surprise to a large number of people.

A man who likes his work is bound to impart that enthusiasm to his students. That's the first thing that struck me about the Tech faculty show. An instructor who keeps on experimenting in his chosen field, whether for industry or personal pleasure, is certain to have a healthy influence on the next generation, be they painters, designers, art teachers, or business men.

Seventeen men and three women

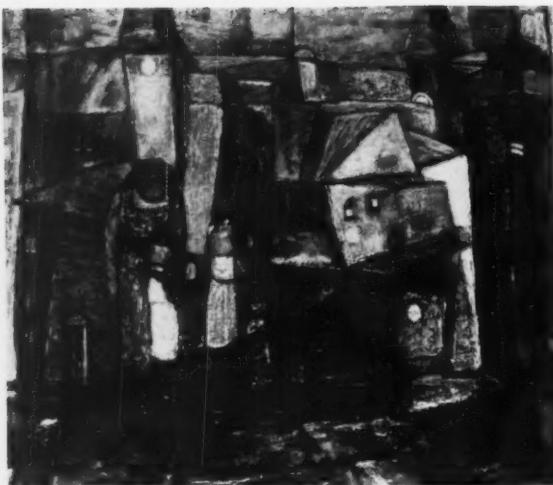
are in this group. The exhibition adds up to over one hundred pieces: including oils, water colors, lithographs, sculpture, jewelry, ceramics, industrial designs, mural projects, printed material, and furniture.

Head of the department, Wilfred Readio (his article, "The Artist's Education at Carnegie," was in the March *CARNEGIE MAGAZINE*) illustrates his belief in the humanistic approach by examples of his own avocations. Readio is interested in lithography (also fishing) and this is evident in three fine examples of his work; in his painting, too, he has consistently shown a special awareness of the rhythms and patterns of nature.

Robert Lepper, chairman of the exhibition, has always worked and taught with the conviction that art is a way of life. As a muralist he is outstanding, and here he has included the scale model for the ceiling executed for the Charleston, West Virginia, airport; less well-known are Lepper's experiments with sheet aluminum as a basis for sculpture; and the amount of printing design he has done in the community, including the cover for Carnegie Institute's catalogues for the PAINTING IN THE UNITED STATES exhibi-



CHICKENS BY RAYMOND SIMBOLI



UNCERTAIN HOUR BY SAMUEL ROSENBERG

tions seven years in succession.

Carnegie Tech students are extremely fortunate in having so many excellent artists as teachers, practicing painters whose philosophy ranges from the naturalistic to the abstract, and who exhibit in both local and national shows.

Samuel Rosenberg's reputation as an imaginative painter and teacher is legend. Most recently he has turned his sensitive talent for mystic and religious painting toward a project for a mural intended for one of our local Catholic churches. Balcomb Greene (whose previous career as a teacher of English at Dartmouth certainly has added no literal quality to his almost completely non-objective style) has a really important national reputation; he was recently cited by *Art News* among the ten best one-man shows of the 1950 New York season, and his paintings are owned by a number of national museums.

Raymond Simboli was recently elected president of the Pittsburgh Associated Artists, and exhibits in all their shows. Russell Hyde, with a background of both engineering and art, combines his interests by inventing such functional and handsome pieces as the table-easel shown in the current exhibition that is now used in the studios of the fine arts department. Roy Hilton, another well-known teacher, is working now in display and portraiture;

but his exhibited paintings of Pittsburgh scenes explain how design and subject can be successfully merged.

Russell Twiggs' decorative abstracts adorn many local homes; he has recently been experimenting with silk screen prints as a direct medium and won first prize in the important 1951 Serigraph Annual. Carolin McCreary and Esther Topp Edmonds, although both skillful landscape painters, are becoming increasingly famous for their portrait work. In the current exhibition, the McCreary study of *Helene*, wife of B. Kenneth Johnstone, head of Tech's College of Fine Arts, is a sensitive and dramatic

likeness. And Esther Edmonds' talent for capturing the evanescent charm of youth is well illustrated by two charcoal and portrait studies of young girls.

The work of former students of Frederic Clayter testifies to his success as a teacher, but he is so well known as a professional craftsman in precious stones and metals



HEPSABAW & DAPHNIE BY DOROTHY W. RIESTER

that one tends to forget this far-reaching influence. In addition to jewelry, the current exhibition includes three sterling silver trophies commissioned by the City of Pittsburgh, which I doubt many local citizens have seen.

Although the younger members of the faculty have not been teaching long enough for a student generation to rise up and call them blessed, they are all building solid reputations as instructors and craftsmen in their various fields.

George Koren, one of Tech's own Prix de Rome graduates, has actually been able to establish a successful professional practice in sculpture, doing work for both public and private buildings. *Coal* and *Transportation* are plaster models for a projected panel for Tech's Industrial Administration Building. (Lepper is doing murals for this, too.) And Dorothy Winner Riester, a well-known local sculptor, who runs a farm with one hand and does prize-winning ceramics with the other, is also showing representative work.

Highlighting the industrial design department, Richard Felver's wide range of exhibits—machine products in drawn steel, aluminum, plastic, and ceramic—illustrates Tech's continuing close tie-up with local industry. Howard Worner's major professional interest is industrial painting; he includes examples of his excellent series for the Westinghouse East Pittsburgh plant, but not the ones he is doing for United



TROUT WATER, a lithograph by WILFRED A. READIO

States Steel. William Libby, whose top-flight lithography is in many national print collections, including the Library of Congress, is working currently on industrial illustrations for an Eastern railroad. Wesley Mills, known primarily for his prize-winning ceramics (ten pieces are in the show) also designs and illustrates textbooks and educational bulletins. Stephen Kubisak's extracurricular interests include excellent display work, commissioned for a local department store.

Roger Anliker, whose skill in various painting media has already won him a one-man show in New York, was honored by being included in the recent Whitney Museum (New York) annual, as well as the 1951 Corcoran (Washington) and the Philadelphia Art Alliance exhibitions. Like Perry Davis (whose excellent article appeared in the May CARNEGIE MAGAZINE) he is interested in local art activities. Davis, especially, has added much to the community by his work at the Arts and Crafts Center; and he has co-operated extensively with student groups in the fields of modern films, dance, and photography.

Carnegie Institute is to be congratulated upon collaborating so generously with Tech to put on this show. Maybe next year the faculties of the architecture, drama, or music department—or all three—will fill out the story.

Mrs. Jena, the wife of a Pittsburgh physician, writes art criticism regularly for the *Post-Gazette*, with which she has been associated for a number of years. For some time she also wrote the "Polly Column," woman's feature on the morning paper. A graduate of Vassar College, she is active on the board of the Arts and Crafts Center and on the Planned Parenthood Clinic of Pittsburgh.

THE ROSE, QUEEN OF FLOWERS

By O. E. JENNINGS



THE rose has a long and interesting history. Tens of millions of years ago, when horses were the size of small ponies and had three toes on each foot, there were roses in what is now western Europe and western United States. Truly, from their fossil record, roses belong to the blue-blooded aristocracy of old families among our present-day garden flowers.

There are now known to be more than a hundred kinds of wild roses, mostly native of the cooler countries of the northern hemisphere, although there are a few in the higher and cooler altitudes of the mountains of Ethiopia, India, the Philippines, and Mexico. There are no native roses in the West Indies, but Iceland has five—about the same number as we have in western Pennsylvania.

The word "botany" seems to be derived from an old Greek term meaning herbage, or that which is good to eat, and primitive man probably looked upon the rose as something possibly good to eat, rather than to smell! At the present time the subacid fruits of the Roxburgh rose, sometimes as much as two inches in diameter, are eaten in China and Japan. The fruits, or "hips" as they are often called, of the familiar *Rosa rugosa* of the Far East, and *Rosa villosa* of Europe and western Asia, are cooked with sugar and eaten as a sort of confection. In parts of Greece and Turkey rose petals are mixed with water and sugar, or honey, to form a sweet and pleasant drink. The petals of the red rosebuds of *Rosa gallica* are dried and used to impart pleasant odors to various pharmaceutical preparations. The fragrant ethereal oil distilled over with water from the cabbage rose of the eastern Caucasus is the rose water already known to the ancients, and attar of roses, mainly obtained from the damask rose of Asia Minor, consists of the oil of roses, much

used for flavors and perfumes.

The earlier civilizations of Egypt and Babylonia were developed in warmer climates somewhat south of the best latitudes for roses, although there were five wild species in Palestine and one in Ethiopia. In the Bible the word "rose" does not always refer to a real rose. Some of the passages are thought to refer to the native Phoenician rose, others, such as the rose of Jericho, to *Anastatica*, the resurrection plant, while Isaiah's rose of the desert was probably a narcissus. Poets have sung the praises of the rose from time

immemorial, and there are references to it in Homer's *Iliad*. Theophrastus, the "father of botany," wrote in the fourth century B.C. of the differences in the kinds of roses and stated that the Greeks were even then growing double roses.

Horace, the Roman, wrote shortly before Christ that roses were used as decorations for banquets but that they were very expensive! This sounds quite modern, although written two thousand years ago. Nero is said to have spent the equivalent of \$150,000 for roses for a single supper.

During Roman times it was the custom of the emperors to grant the very distinguished privilege of adding a rose to the ornaments on a shield, and there has come down to us from Roman times a wealth of material on the symbolism and importance of the rose in the thoughts and customs of the people. The rose was used by the early Christians as a symbol on the mural decorations on the walls of the catacombs of Rome, the crusaders brought back its symbolism to France and England, and the rose was frequently shown on the tapestries of the Middle Ages and later. In the Wars of the Roses, the House of York, under a white rose, fought the House of Lancaster, under a red rose; and the succeeding House of Tudor combined the two into the "Tudor rose" as the national emblem of England. The wild rose is the state flower of New York, North Dakota, and Iowa,



IVORY ROSES FROM EUROPE, LATE NINETEENTH CENTURY

(largest 2" across)

H. J. Heinz Collection, Carnegie Museum

and the American Beauty rose has been adopted by the District of Columbia.

In Scandinavian mythology the rose was under the protection of Laurin, the king of the fairies and dwarfs, and should anyone pilfer a single flower after the rose-garden gates were closed the penalty was the loss of a hand or foot. In ancient times it was the flower of Venus; when guests were dining and wining, a rose was given to each as a reminder that scandals must be kept secret. In some of the northern countries of Europe it was the custom to hang a rose from the ceiling when secrecy was desired; hence the term "sub rosa."

For centuries the rose has been grown for its beauty and fragrance practically everywhere in temperate climes. The Malmaison gardens of the Empress Josephine near Paris are said to have contained about two hundred varieties of roses. No other family of plants so readily produces new

forms by hybridization or by the encouragement of mutation as does the rose family. There are now more than thirty-two hundred named horticultural varieties of roses recognized by the American Rose Society, and their classification is the despair of the botanist. Most of these are double roses, but to many of us the simple beauty and delightful fragrance of our untamed roses of pasture land and swamp will never be forgotten. In the words of Bayard Taylor—

*A waft from the roadside bank
Tells where the wild rose nods.*

The rose is almost a universal symbol of sweetness; it has been the symbol of war, the symbol of peace, the emblem of honor, and the emblem of prospering peoples. Even today, the Pope uses the rose in conferring special recognition on a sovereign, a church, a sanctuary, or a country, and a "rosary" may be either a bed of roses, a rose garden, a series of prayers, or a string of prayer beads. No other cultivated plant has had a history of association with mankind and has so entered into the thoughts and customs of cultured peoples as has the rose. From pre-Babylonian times up through the peoples of Asia Minor, Greece, and Rome, the rose has interwoven itself with our poetry, art, symbolism, and with our concepts of beauty. We may justly crown the rose as the Queen of Flowers.

Dr. Jennings received the B.S. degree from Ohio State in 1903, the Ph.D. and D.Sc. degrees from University of Pittsburgh, and the LL.D. from Waynesburg College. Having joined the Museum staff in 1904, he eventually became curator of botany and, concurrently at Pitt, head of the department of biological sciences until appointed director of the Museum in 1946, from which he retired as director emeritus in 1948. A member of various national scientific societies, he is also president of The Academy of Science and Art of Pittsburgh and of the Botanical Society of Western Pennsylvania.

FLYING FAMILY

BY GLADYS KINNEY

DID you ever take the opportunity to learn the possibilities of flying your own plane? Flying is becoming more important and filling a larger portion of our lives every day. How our family has enjoyed "growing up with it" during the last nine years! It has broadened our scope and been a boon to our business.

My husband has his own engineering firm, which necessitates his visiting most cities that have steel plants. We began by making calls to Youngstown, Wheeling, and Cleveland, in a Piper Cub that flies seventy miles an hour. Then a Stinson took us to towns within a radius of five hundred miles, at one hundred twenty miles an hour. Since getting our Beechcraft Bonanza three years ago we have flown five hundred hours at an average speed of one hundred sixty mph, or eighty thousand miles. We have gone from coast to coast, from Mexico to Canada. Yet my husband is in his office more than half the time. Only flying could make this possible.

Back in 1942, when our son and some of his friends were making excellent model planes that would fly with tiny engines, my husband decided the boys should have a treat. He first sent them to Akron and back on an airliner, then took them to Butler to the flying school. Before long, son and his father were taking instructions regularly, and I was sharing all except the actual flying. Son was twelve and his father some thirty years older. I thought that one was too young and the other not young enough to enter this challenging field. But somehow their enthusiasm allayed my doubts and I was soon ready to fly with them.

That winter we three studied navigation and meteorology at the Buhl Planetarium evening school. The war was on and we were busy, my husband with war orders, I with Red Cross, and son with school. Flying and the study connected with it were our relaxation. We managed the required work and passed the examinations. We have continued to read much on

these subjects ever since. One bookcase is full of charts, maps, and magazines on flying. The magazines have excellent editorials on aviation and all business trends.

Two pilots in one family seemed enough, so I concentrated on navigation. On long trips with new routes and strange ports, I could relieve the pilot of much routine radio and map work. Radios are very important in navigating. The government has set up an excellent network of ports equipped with men to aid in flying. All large busy ports and many small ones have towers with men on duty constantly to oversee traffic in and out of port. Each port has a range station nearby whose radio men aid the pilot after he is airborne. There are meteorologists who make weather observations periodically throughout the twenty-four-hour day. Weather data is collected from all over the country by teletype and then broadcast fifteen minutes before and after the hour. The government maintains beacons every ten miles along the main airways that are lighted at night. Each beacon gives a Morse code signal that tells its location. The government has also built and maintained many emergency ports, to be used in by-passing bad weather.

In fair weather there is little static on the plane radio. As the pilot nears each city on his route he tunes in the frequency given on the map, listens to the call letters of that city and then flies the beam. With the old radios, when showers were brewing or there was an unsettled atmosphere the static could be confusing. Just when you needed aid most you could not hear distinctly. Last year when we were flying from Dallas to Birmingham, through light showers, we traveled without radio aid much of the time. The weather was safe for contact flying, visibility was fair and there was little wind to take us off course. But we had an uneasy feeling because we were accustomed to hearing the call letters of every port as we passed over. We could be sure of Vicksburg; there was the sharp point in the Mississippi and the city on the east bank. Then I carefully checked



MR. AND MRS. KINNEY WITH THEIR BEECHCRAFT BONANZA

time and distance for Jackson; there it was on the Pearl River. Our course was near Meridian but I could not make out the call letters, just a scramble. The clouds were growing darker. The showers were lighter to the north, so we turned in that direction and soon identified Tuscaloosa. Our ADF, automatic directional finder, took us there and it was an easy step beyond to Birmingham.

No matter how many radios a pilot has, he must know at all times where he is in case the radios should fail. If he travels a route for the first time, he watches maps and checks landmarks carefully. It becomes an interesting game as he flies along. There is no traffic as we know it on the ground, so he looks at the sky for weather and to the ground for orientation. I have grown to know the air routes of our most frequent business calls. There is something about an air map that is captivating, and one feels the urge to find new points of interest along familiar routes. I used to think my husband checked location more closely than necessary, but one experience taught me the importance of knowing exactly where one is. A friend was flying with us and accidentally pushed the door-knob in the wrong direction. The door flew open. Out flew our maps. The wind kept the door almost closed. Fortunately my husband knew our position, and within a few minutes we had our extra maps out of the compartment, an airport located, and had made a landing. This was near Nashville, Tennessee, which was not very familiar territory to us then.

If we have a long week end over a holi-

day we fly to Minneapolis to see the family. The Fourth of July was on Tuesday last summer so we planned to start on Friday. We called the weather bureau the previous day. The predictions in general were good for the next twenty-four hours. That night we checked weather again. Then I telephoned my brother in Minneapolis, explaining to him that we would file a flight plan which he could find

out about by calling "communications" at his own port next day. The flight plan, which is recommended by the government's Civil Aeronautics Administration, consists of the following data: Beech Bonanza, pilot, S. P. Kinney; fuel on board, six hours; speed, one hundred sixty mph.; stopover one hour Joliet; estimated time departure 9:00 A.M.; estimated time arrival, 3:00 P.M.; destination Minneapolis. My brother called his port at 10:00 A.M. Friday and learned that we were in the air and when we expected to arrive.

Upon arrival at our port, which is Allegheny County Airport, we made our last check of weather. We talked to flight advisor, looked over the recent weather maps and teletype messages. Everything was favorable, with light showers in the Chicago area. So we filed a flight plan, then went to the plane, checking everything as to fuel and engine. As we taxied along the ramp we called tower on our radio, "Bonanza three zero Victor on the west ramp, requesting take-off instructions."

The answer came back promptly: "Cleared to runway two seven, altimeter setting three zero, one zero; time zero nine; wind, west northwest ten." "Runway two seven" means two seventy on the compass, or a westerly direction for take-off. Planes always take off into the wind.

We taxied to the apron and held while the pilot checked everything, finally opening the throttle wide. Then on the radio we sent, "Bonanza three zero Victor ready to go when clear," and the answer came, "Three zero Victor cleared for take-off." As we reached a speed of seventy miles

down the runway we left the ground. After gaining a little altitude and more speed, the landing gear was retracted, a regulation left turn was made, and we proceeded.

We had planned to go via Akron, Vermilion, and then west to Toledo, Goshen, Gary, Joliet, then northwest to Rockford, LaCrosse, and Minneapolis. Our first compass reading was three hundred five degrees. We climbed to four thousand feet, which was five hundred feet below the clouds. Up there the temperature in the plane was sixty-eight, although it was eighty on the ground. The northwest wind was a head wind but at ten miles it would not retard us appreciably.

The day was clear and we could distinguish the Cathedral of Learning, the high buildings of the Triangle, and all the numerous bridges for which Pittsburgh is famous. The rivers are always fascinating. We of Pittsburgh realize their vast importance when we view miles and miles of plants along their banks.

A few minutes out of Pittsburgh I tuned the ADF to three sixty-two, the Akron frequency. Soon we heard AKR and knew we were on course. In case one is averse to learning Morse code, the map gives the dots and dashes for each port. This procedure was followed all along the route. The time was nine forty-five and we knew the range operator would be broadcasting weather. We listened, and then asked for more distant cities on our route. All was clear to Toledo, still rain at Chicago. We reported progress on our flight plan at Vermilion, then turned west to Toledo. Lake Erie was clear and blue and indescribably peaceful. At this time there were definite signs of oncoming rain, but it was the quiet sort, without turbulence or lightning. We could go through, but as it seemed to be in a narrow strip, we chose to go around. The rain was near now, coming toward us like a silver curtain. It was traveling slower than the plane, and we easily stayed out of its path. As we neared Chicago the smoke and rain looked menacing, so we went to the south as far as Crown Point. We had passed the rain as I tuned in Joliet. The needle on the ADF indicated our path would be northwest and soon we were back on course. The map showed the Joliet port was about five miles west of the city. We

saw it long before time to make the approach. Ports are usually easy to find in good weather, unless they are close to a city. The Burbank airport, in the Los Angeles area, is difficult for a stranger to find because since the port was built the city has grown around it. But in the Midwest a pilot takes it easy, among rolling hills with visibility fifteen miles most of the time.

We landed at Joliet for fuel and lunch. We had sufficient fuel to go to our destination but it is wise to refuel once on a trip of eight hundred miles. It is over a thousand miles by road but only eight hundred by air. Our fuel range is eleven hundred miles, as we have an extra gas tank in the baggage compartment. Joliet has a good paved port and a good lunchroom. We stretched and were glad for a little exercise but were not tired. There is no comparison in the energy expended driving a car in moderate traffic and piloting a plane in good weather. We looked over the weather information. It was good to Minneapolis, but the wind was increasing and we would be flying into it. As we were in the air we talked to the Joliet range station. He checked our flight plan and recorded our time of departure. We were to find later that Minneapolis had checked that time for my brother and phoned him that we would be thirty minutes late because of headwinds.

This part of the Midwest has rolling fertile hills. We could see for fifty miles in all directions and not an acre of wasteland. We flew along away from the turmoil and toil and wished that all busy, tired people could feel the joy and peace that come with flying.

The wind was increasing. The Rockford radio gave it at thirty mph and from the northwest. I figured on the computer the distance we had gone compared with our

Mrs. Kinney grew up in Iowa and taught high school mathematics in Minnesota. She also coached a girls' basketball team, often traveling through northern Minnesota snows for week-end games. These hardy winters, she feels, created a spirit which easily took to flying.

Her husband is president of S. P. Kinney, Engineers, blast-furnace engineers.

Outside the home and family she has spent much time with sightless women, working at a home for neglected girls, and in Red Cross hospital work during World War II.

speed and knew we would be thirty minutes late. Then we were going up the old Mississippi. The wide river meanders but our path was straight. We had passed most of the small towns, covering the space in two hours that had taken all day when we drove a car a few years ago. Going north, St. Paul is on the right bank of the river and Minneapolis on the left. The Foshay tower was the first building we could distinguish, then the airport, large and unmistakable.

We contacted tower when we were within ten miles. The answer came: "Cleared to enter traffic pattern, number three to land, runway two nine, wind thirty-five with gusts to forty." We sighted the aircraft ahead of us in the pattern; a small craft very near the ground and a DC-3 just ahead of us. This would not be difficult as the large ship goes about the same speed as ours. When a pilot gains too rapidly on a ship ahead in the pattern, he sometimes takes a three sixty turn to permit the slower craft plenty of time to land.

We had begun to lose altitude and speed ten minutes ago in anticipation of the landing. At one hundred mph we lowered the gear, soon afterwards the flaps. All was clear on the right, all clear on the left, gear down, flaps down, speed ninety mph as we turned on base leg. The two planes ahead were in and we were cleared to land. The thirty-five-mile wind stopped us on the first hundred feet of the runway. The tower gave us instructions that took us directly to our hangar. There the family was waiting!

On our return we found we would have a twenty-five mile tailwind at seven-thousand-foot altitude. Winds aloft are often of different speed and direction than those on the ground. The pilot sometimes finds a favorable wind at a reasonable altitude for his ship and it is wise to check with the weather bureau. So we climbed to seven thousand feet and made the first half of our trip at two hundred mph. In fact, no matter how rapidly I would compute the time in relation to speed and then place the port, my pilot would laugh and tell me that we had just passed that one.

We decided to stop at Goshen for lunch. It is a medium-sized grass port with fine approaches. As we taxied to the small ad-

ministration building, the manager was just getting into a ship. He called out "If you wish lunch, take my car. There's a good restaurant one mile east." With that he closed his ship's door and took off. His wife was on duty in case we needed gas or help of any kind. This is typical of accommodations offered by airport people to transient flyers.

At Toledo we stopped to wait for Pittsburgh weather to clear. There had been rain in the Pittsburgh area nearly all day. We talked to the radio operators and watched the weather news coming in on the teletype. Within an hour all was clear. Akron looked fine as we went over, but as we neared East Liverpool and the Ohio River the soup was churning. We were coming in on the heels of the rain and the river was up to its old monkeyshines. We seemed to be traveling old familiar alleys on a foggy night. Soon we saw Greater Pittsburgh Airport, which usually shows up plainly for many miles. We landed at the home port at five o'clock, just after the rained had cleared.

This was Tuesday. We had visited for three days and had taken a restful, enjoyable trip of sixteen hundred miles since the previous Friday.

This year we have installed the new omni radio which is free from static. It makes navigation precision-sure and opens new vistas to people who fly many different routes. Where the old radio range has four beams, running in four directions, the omni can be likened to a wheel with the radio station the hub, and an infinite number of beams radiating from the station in all directions. A pilot may fly a track to a station from any point in the surrounding area or he may fly a definite path from a station to his destination. The Civil Aeronautics Administration has completed installation of three hundred omni stations, and plans are in process to erect one hundred more. There is one thing to be kept in mind when operating on omni radio. The beams operate on a line of sight and are deflected by terrain. Thus traveling at a reasonably high altitude increases the range of reception. For instance, if we climb to seven thousand feet on leaving Pittsburgh airport we can usually make contact with a radio station as far away as Cleveland.

THE STORY OF BOOKS FOR CHILDREN

BY JANE DARAH

THREE hundred years is a short span of time in the pages of history, but during those years juvenile books have progressed a long way. No one could hope to cover the subject thoroughly in a day's talking or pages of writing.

One could digress on the physical aspects of a book: the hornbook, the battle-dores, the chapbooks, the tiny volumes bound in flowered gilt paper by John Newbery, the crude woodcuts, the first use of color in the drawings, the improvement of print, or the development in techniques of illustrating up to today, when we have books of all sizes, shapes, color, and exquisite make-up. From past experiences we have learned that a child wants his book to look interesting inside and outside. Colorful binding, appealing size and shape, effective illustrations, clear typography, and good paper, all play an important part in the successful life of a juvenile book.

Another aspect in the development of children's books could be the persons who have contributed: publishers, authors, illustrators, and librarians, i.e., John Newbery, Randolph Caldecott, Hans Christian Andersen, Caroline Hewins, Anne Carroll Moore, to name a few who courageously presented their beliefs.

But rather let us consider the books that have lived and why they live. The hornbook, the little wooden paddle with the Lord's Prayer and the alphabet printed on parchment, covered with transparent horn, used by children in the sixteenth century, is usually considered the first book intended just for boys and girls. Strange to call this a book, made often with a hole in the handle to tie to a child's sash. Actually prior to this there had been lessons for children written in Latin pertaining to grammar, rhetoric, and music, and in the fifteenth century there were manuscripts emphasizing manners, morals, and conduct for those young men training for page, esquire, and knighthood. But none of these could be physically possessed and perhaps used for play as well as educational purposes, so they were not con-

sidered children's books. The hornbooks were used up to the eighteenth century, when they were replaced with the cardboard battle-dores. The reading entertainment value of these early books for children was so lacking that the children appropriated such things as Malory's *Morte d'Arthur*, *Historye of Reynard the Foxe*, and Aesop's *Fables*, published for adults. They still remain popular today.

During this time the children also satisfied their desire for adventure—they have always wanted excitement in their reading—by reading chapbooks, again something published with the adult in mind. These were cheap little books, poorly printed, with crude woodcut illustrations. The contents were old legends, tales of the Middle Ages, stories with fairy-tale elements, retold in drastically condensed version, often vulgar language. "All literary charm was lost; the grammar was often faulty." The educated upper classes of England no doubt frowned on these, but they could be purchased for a penny and were easy to obtain from wandering peddlers or chapmen. The commoner wanted reading material, as did all boys and girls, so these books were continuously in demand. Our current comic question closely correlates this. The chapbooks were readily available, and had crude illustrations. They were condensed versions of popular folk tales and had an adventure on each page.

The seventeenth century saw the rise of Puritanism. In direct contrast to the chapman's crude stories, there were published and made available to boys and girls, books full of gloom, instruction concerning religion and preparedness for death. Adults were sure this was the right literature for the child.

James Janeway, a clergyman, wrote a book of verse, his purpose to make children happy—to make them happy by instilling a fear of hell. It is called: *A Token for Children: Being an Exact Account of the Conversion, Holy and Exemplary Lives, and Joyful Deaths of Several Young Children. To Which Is Now Added Prayers and Graces*,

Fitted for the Use of Little Children.

Out of this gloom there did emerge one of the great books—Bunyan's *Pilgrim's Progress* in 1678. While it was written for adults, the children were quick to recognize in it the elements of a good adventure story and of a fairy tale, and adopted it as their own. It is now retold and shortened for modern readers by Mary Godolphin and illustrated by Robert Lawson.

The first book for children to be published in the New World appeared in 1646. It was written by John Cotton and called: *Milk for Babes, Drawn Out of the Breasts of Both Testaments, Chiefly for the Spiritual Nourishment of Boston Babes in Either England, But May Be of Like Use for Any Children.*

This was followed in 1690 by the *New England Primer*, in which moral and religious instruction is given through bits of verse and prose. The most famous line reads:

In Adam's fall
We sinned all,
Thy life to mend
God's books attend.

At the very end of the century, in 1693, John Locke in his *Thoughts on Education* suggested that a child be given some entertaining reading matter like *Aesop's Fables* or *Reynard the Fox*, rather than the Psalter and New Testament. At practically the same time in France, Charles Perrault, a member of the French Academy, began to write the fairy tales in a manner pleasing to children. A happy fresh note was descending into the children's book world. The force of Puritanism had spent itself by the eighteenth century, adults began to seek for children not only books that were instructive but also those that combined the function of

instruction with that of entertainment.

Another book written for adults was taken over by the boys and girls—*Robinson Crusoe*, published in 1719. The ingenuity and bravery of this ship-wrecked Robinson Crusoe as he struggled for existence on the desert island satisfied the child's desire to achieve. Of course there were long passages of moral intent which we now omit in our children's editions. Children of earlier days must have skipped these boring accounts.

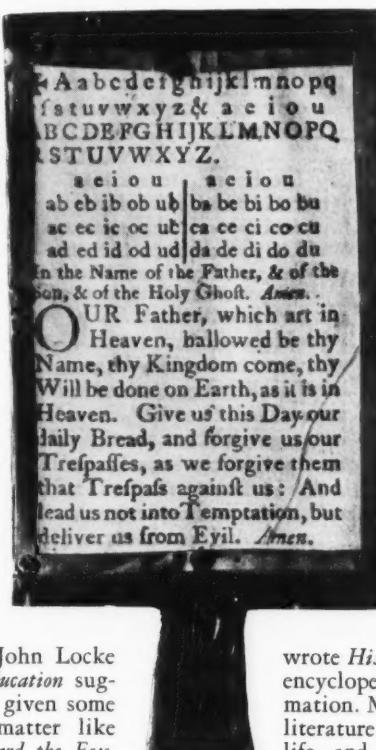
In 1744 John Newbery published his first book just for children, *A Little Pretty Pocket-Book*. This was followed by the first collection of *Mother Goose* in England and by *Goody Two-Shoes*, supposedly authored by Oliver Goldsmith.

By the end of the eighteenth century the Rousseau influence ('Education is to develop the nature of man') was the new pattern in child study, and the didactic school of writers for children took over.

Thomas Day, with his aim to instruct, wrote *History of Sanford and Merton*, encyclopedic in its scope of information. Maria Edgeworth felt folk literature belonged to primitive life and consequently filled her books with morals, truthfulness, honesty, thrift, and obedience in her *Rosamond*, *The Parent's Assistant*, and *Moral Tales for Young People*.

In America, Samuel Goodrich believed children should have facts, not giants and fairies. He wrote under the name of Peter Parley, turning out numerous scrappy little books on every available subject: biography, science, history, geography. And then came Jacob Abbott with his

HORNBOOK FROM 16TH-CENTURY ENGLAND
FORERUNNER OF THE CHILDREN'S READER
(actual size)
Carnegie Library School Collection



informational travel series. His *Rollo* was dragged from city to city, country to country. What the writing lacked in color and originality was made up in moral tone.

And another didactic series came late in the nineteenth century. The *Elsie Dinsmore* books by Martha Finley had a definite effect upon the child.

Today we all agree reading should be enjoyable. Look at the titles of children's reading lists—"Reading for Fun," "Too Good to Miss," "High Roads to Pleasure." Books are written primarily to entertain and to give pleasure. This is a characteristic that crept into juvenile literature at the beginning of the nineteenth century.

The nineteenth century saw many changes in the social world and in children's literature. The fairy tale, opposed in the didactic era, was again looked upon with favor. Charles and Mary Lamb retold Shakespeare and *Ulysses* (1807); Nathaniel Hawthorne wrote *The Wonderbook* (1851); Charles Kingsley *The Heroes* (1856); the Grimm Brothers' scientific study of German folklore was translated into English (1823); and Hans Christian Andersen's first volume of fairy tales was published in 1835.

By mid-nineteenth century the religious, moral, and educational tones were not nearly so strong, and out of a maze of sloppy writing, such as the cheap Oliver Optic series, the Alger books, all of which followed the pattern from bootblack to success, the Dotty Dimples, the Little Prudies, there came some very bright spots that still glow with originality, realisms, true characterization, and pure fun.

Among the most memorable are:

- 1863—Charles Kingsley's *Water Babies*
- 1865—Lewis Carroll's *Alice's Adventures in Wonderland* written for "A dear child in memory of a summer day."
- 1865—Mary Mapes Dodge's *Hans Brinker or the Silver Skates*
- 1868—Louisa May Alcott's *Little Women*
- 1871—George MacDonald's *At the Back of the North Wind*
- 1876—Mark Twain's *Adventures of Tom Sawyer*
- 1880—Lucretia Hale's *Peterkin Papers*
- 1880—Johanna Spyri's lovable *Heidi*
- 1881—James Otis Kaler's *Toby Tyler or Ten Weeks with a Circus*
- 1883—Robert Louis Stevenson's *Treasure Island*
- 1885-87—Howard Pyle's *Pepper and Salt; Wonder Clock*, and other wonderful stories for boys
- 1894—Rudyard Kipling's *Jungle Book*

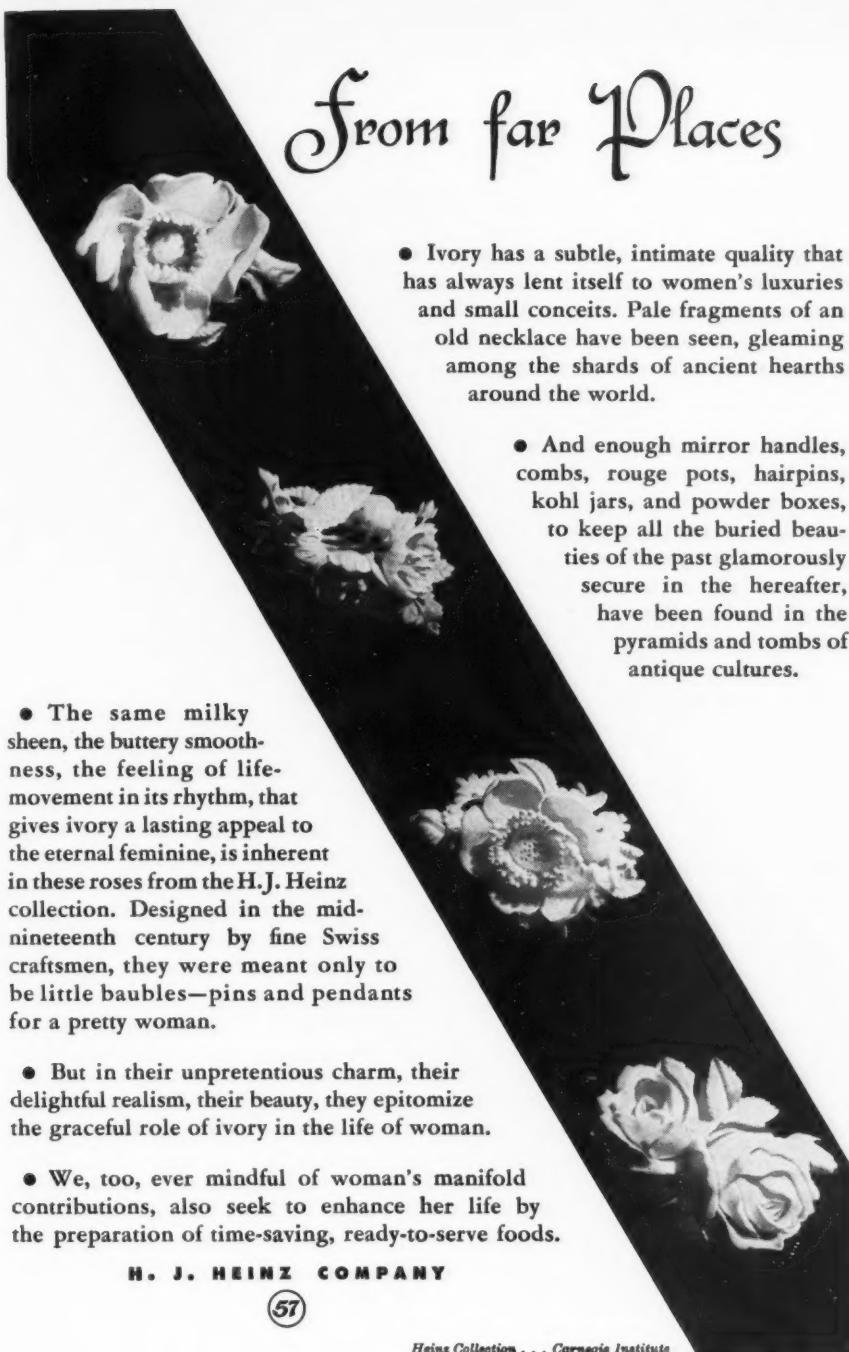
In the twentieth century children have been recognized as individuals. They are given their own place in the public libraries, as at the Carnegie Library of Pittsburgh; librarians are being given special training so they can better serve the children who continuously demand books; publishing houses have departmentalized and appointed special editors for children's books; children's Book Week was established in 1919; the Newbery and the Caldecott medals are awarded to authors and artists for distinguished writing and illustrating of books for boys and girls. There has been created a growing market for juvenile books, and as the market has grown, so have the qualities of books.

Looking back over the years at the stories that have lived and continued to appeal, librarians and publishers who have been real crusaders in this period for better books have recognized certain elements children want in their books. The fairy tales and hero stories found in the chapter books still furnish delight for the young: *Bluebeard*, *Cinderella*, *Robinson Crusoe*, *Pilgrim's Progress*, and *King Arthur*, all are steeped in adventure. *Hans Brinker* and *Little Women* present boys and girls in normal settings. The boyish pranks of *Toby Tyler* and *Tom Sawyer* appeal to a sense of humor. These elements along with literary style and creative illustrations, are what authors and illustrators have been encouraged to use: no more preparedness for hell, pointed lessons in truth, sentimental heroines, stuffed-shirt heroes, or hastily written insufficient information.

Through the years books will continue to reflect the social conditions of the period in which they are written, as during World War I, the depression years, or this atomic age. There will be definite fads for such books as the numerous career stories or the easy reading, complacent biographies, yes, we will have our *Rollos* and *Dotty Dimples*, but in each generation the children will label certain books as "good" by their continuous rereading.

This article is taken from an address which Miss Darrah gave last year in Pittsburgh, during the fiftieth anniversary of the Children's Library Association. She has had considerable library experience before going to Youngstown, Ohio, four years ago, where she is director of work with children at the Public Library.

From far Places



- Ivory has a subtle, intimate quality that has always lent itself to women's luxuries and small conceits. Pale fragments of an old necklace have been seen, gleaming among the shards of ancient hearths around the world.
- And enough mirror handles, combs, rouge pots, hairpins, kohl jars, and powder boxes, to keep all the buried beauties of the past glamorously secure in the hereafter, have been found in the pyramids and tombs of antique cultures.
- The same milky sheen, the buttery smoothness, the feeling of life-movement in its rhythm, that gives ivory a lasting appeal to the eternal feminine, is inherent in these roses from the H. J. Heinz collection. Designed in the mid-nineteenth century by fine Swiss craftsmen, they were meant only to be little baubles—pins and pendants for a pretty woman.
- But in their unpretentious charm, their delightful realism, their beauty, they epitomize the graceful role of ivory in the life of woman.
- We, too, ever mindful of woman's manifold contributions, also seek to enhance her life by the preparation of time-saving, ready-to-serve foods.

H. J. HEINZ COMPANY

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Heinz Collection . . . Carnegie Institute

Fossil Parade

WINGED REPTILES

BY J. LEROY KAY



THE Spanish proverb, "Take what you want, says God, 'and pay for it,'" sums up pretty well in folk terms a fundamental truth about the evolution of living things. For some sixty millions of years, including a mere million or so witnessed by the upstart Man, the warm-blooded hairy creatures that suckle their young have been successfully lording it over other forms of animal life. In exchange for their eminence they have had to remain earthbound or waterbound—all of them, that is, but one small, fragile, and unpopular species. Not counting aviators-by-courtesy, such as certain gliding squirrels or Man the machine-maker, the humble bat is all we have to show that a mammal can take to the air as its chief means of getting from place to place. With this one exception, the power of true flight has been developed only in birds and reptiles ever since at least a hundred and twenty million years ago.

Somewhere around that time, during the middle Mesozoic era, there were deposited in what is now Europe the remains of various pterosaurs or winged lizards. These were among the first fossil vertebrates discovered in the early days of paleontology, and the first specimen described was *Pterodactylus* (wing-fingered), with the result that the whole order has become commonly known as pterodactyls.

This famous contemporary of the dinosaurs is represented at Carnegie Museum by a short-tailed skeleton, about the size of a dove, discovered near Solenhoefen in Bavaria. If you examined it casually, you might conclude that it was a remote ancestor of the birds. There are some points of resemblance: the bones were hollow, like birds' bones, and many were fused or joined together to give strength to the wings. However, a closer study makes it clear that the pterosaurs are not in the direct line of descent of birds, but are more closely related to other orders of reptiles.

Our knowledge of these winged reptiles owes much to the art of lithography—an early example of the aid rendered to modern science by industry. The search for stone that would faithfully reproduce fine details of a drawing led to quarries in southern Germany where the fossil remains of pterosaurs had been so well preserved that impressions of the wing and tail membranes could be clearly seen. Thus, the bony structure of pterosaurs is as well known as that of most extinct vertebrates. Their wings are built differently from bats' or birds' wings. The bones of the fourth "finger" were elongated to form an attachment for the wing membrane, which spread between this finger and the hind legs and tail. The other fingers were short claws, and the thumb was either missing or vestigial. A bat's wing, in contrast, has all four fingers elongated to support the membrane, something like the stays of an umbrella, whereas in birds the fingers are coalesced and the wing feathers attached to the skin covering the fingers.

The Baron de Bayet collection of European Jurassic pterosaurs, purchased by Andrew Carnegie and presented to the Museum in 1903, is probably the largest one of European pterosaurs in the United States. This collection includes, in addition to *Pterodactylus*, several more or less complete skeletons, skulls, and other parts of *Rhamphorhynchus* (prow-beak), perhaps the best-known Jurassic pterosaur, also from Solenhoefen, Bavaria. The skeleton on exhibition has a wingspread of three and

Dr. Kay, curator of vertebrate fossils at Carnegie Museum, writes on pterosaurs this month. The series, "Fossil Parade," which he has begun with five articles on fossil vertebrates, will continue in *CARNEGIE MAGAZINE* next fall. After the two months' interruption, Arthur S. Coggeshall, director of the Santa Barbara Museum of Natural History, who was intimately associated with the paleontological work of Carnegie Museum from 1899 to 1929, will contribute several reminiscent articles about dinosaurs. These will be followed by further articles on fossils by staff members.



NYCTODACTYLUS, A FOSSIL WINGED LIZARD IN THE CARNEGIE MUSEUM COLLECTION
WITH A WINGSPREAD OF OVER FIVE FEET, IS AT LEAST 75 MILLION YEARS OLD

a half feet, and boasts a long tail, the tip of which is missing. The skull is rather long, with large eye sockets and sharp conical teeth projecting forward.

Most pterosaurs have small, weak hind feet, and probably did very little walking on the ground. However, *Campylognathus* (crooked-jaw), another Jurassic form, had a long tail and fairly strong hind feet. This skeleton contrasts with the other specimens on exhibition because it is the only one encased in a dark matrix, and the bones are black.

A fourth Jurassic genus, *Cycnorhamphus* (swan-beak), is represented by a complete skeleton of a small pterosaur with a skull shaped very much like a bird's and with small teeth. It has a complete ring of sclerotic plates in the eye socket. Probably most pterosaurs, like many reptiles and birds, had this protective ring of bony plates surrounding the eye, but *Cycnorhamphus* is the only one in the Carnegie collection that shows it clearly.

Most of these older pterosaurs, dating from the Jurassic, had not only teeth but very long tails as well, which serve to distinguish them from their Cretaceous successors. The latter, as if by way of compensation, sometimes developed enormous wings, covering a maximum spread of nearly thirty feet. The two species shown at Carnegie Museum are *Pteranodon* or "toothless one with wings," the largest of all the pterosaurs, and *Nyctodactylus*, both found in the Cretaceous chalk beds of Kansas. Although the Museum has a considerable collection of *Pteranodon* material, there are no complete skeletons, the one on exhibition being represented by the bones of one wing, which is more than six feet long. The skull also is long,

with a prominent occipital crest extending back and slightly upward, as if to balance the large beak. The Carnegie skeleton of *Nyctodactylus* is fairly complete, with parts of the fourth fingers of the wings restored. This specimen, short-tailed and toothless like *Pteranodon*, has a small, slender head and a wingspread of about five and a half feet.

How the pterosaurs evolved from earlier reptile forms to become the full-fledged flying reptiles of the Jurassic has yet to be determined. Their habits of life also are still a matter for conjecture. Although they are usually pictured as flying or soaring over the seas, and it has been suggested that they fed on fish found near the surface, I doubt whether they could light upon the water and take to the air again without great difficulty. Moreover, their hind feet are not constructed for picking up food, like those of a predatory bird. The first three toes of the front foot are built for grasping, but probably were used only to cling to a tree or ledge while resting. It seems logical to suppose that they got their food from the air, like bats, at least until such time as further evidence may prove otherwise. Unfortunately there is little immediate hope of learning more about the pterosaurs, since the stone in which they are most likely to be found is no longer quarried for lithography, and funds for extensive research in paleontology are not readily available.

Your summer guests will want to visit

CARNEGIE INSTITUTE

From Our PERMANENT COLLECTION

AWAY back in 1925, John E. D. Trask of blessed memory gave a talk at Carnegie Institute in connection with the International of that year. His subject was "America in the Exhibition." The lecture was illustrated with paintings from the United States section of the show. It was one of the most interesting and instructive talks on art ever given at the Institute in that the speaker described how the pictures were actually painted. He gave intimate details of the artist's technique and method of approach, as if he had been in the studio—as he was in many instances—at the time the artist was working.

It has become customary of late for writers to do that very thing for artists. The *Art News* and the *American Artist* have been carrying a series of articles on how artists tackle their problems, and now there are two books on the subject: *Twenty Painters and How They Work* by Ernest W. Watson (Watson-Guptill Publications, Inc.) and *How Paintings Happen* by Ray Bethers (W. W. Norton & Company).

In discussing one of the paintings in the permanent collection, *Awaiting the Absent* by Charles Stanley Reinhart, the writer will attempt the intimate approach. This is possible, though the painting was done in 1888, because a sketchbook of the artist's was presented to the Institute in 1950 by Richard W. Graves. It contains, among many other items, the four pencil sketches, with notations as to colors, reproduced on page 206. That there were additional sketches may be assumed from the fact that a drawing of one of the figures in the completed canvas, the woman with the spyglass standing on the foundation of the cross, appeared in *Essays on American Art and Artists* published by the American Art League in 1896.

Comparing the notes with the painting,

AWAITING THE ABSENT
By Charles Stanley Reinhart
(1844-96)



it will be observed how closely the artist introduced the sketches—as to outline, position, and costume—into the painting. In most instances he also followed his color notes, but naturally when he came to the larger canvas, he modified the colors to adapt them to the new environment. The sketches for *Awaiting the Absent* were made in Brittany around 1880, about the same time that he was making pencil notes for what is probably his best-known painting, *Washed Ashore*, now in the Corcoran Gallery of Art. Mr. Reinhart was primarily an illustrator, as will appear later, and it was natural for him to have a sketchbook ever with him. He was constantly on the lookout for material which he might use as illustrations and in paintings.

Immediately it will be observed that the *croix* in the sketch, except for the foundation stones, is not the large wooden crucifix in the painting. It is the theory that when it came to the painting, the artist substituted the crucifix for the *croix* to secure more dramatic effect and to heighten in the mind of the beholder the premonitions of those who are awaiting the return of their loved ones. Then, too, the *croix*, or even *calvaire*, was to be seen frequently in Brittany, and only rarely and in more recent times, the crucifix.

As has been stated, the artist did not make use of the sketches until he came to work on the gouache study in his Paris studio in 1883, and then, when there was need for a salon painting, he enlarged the study on a huge canvas in oil.

There is every reason to believe that, in addition to the sketches and the study, when it came to the painting, the artist used models, for it has been related that his young son posed for the child in arms whose face is seaward but whose blond head may be seen in the painting.

In developing the oil canvas, it will be observed that the artist followed the sketches more than the gouache study. The latter furnished the general scene he had in mind for the finished painting, but in it the crucifix is on a broader base and is turned landward, as it probably would be in Brittany; moreover only a few of the sketches were used in the study, and the figures appear in different positions. The study is a spirited illustration. In it the drama is greatly intensified, and it is crowded with anxious sea folk. The artist probably referred very little to the gouache when engaged on the painting, which is much better composed, has far more dignity, and carried out his theme very effectively.

The study, which is 32 by 42 inches, is signed "C. S. Reinhart, Paris, '83." It was exhibited in the Men of the Tile Club Exhibition at the Lyman Allyn Museum in 1945. It was lent by Mrs. William S. Terriberry of Old Lyme, a daughter of the artist who has since died. It is now in the collection of drawings of Carnegie Institute, having been presented recently by C. Stanley Reinhart, son of the artist, Mrs. Liliane Reinhart Bennet, his daughter, and John Reinhart Bennet, his grandson.

Awaiting the Absent is oil on canvas, 72 inches in width by 170 in height. It is signed in the lower right corner, "C.S. Reinhart, Paris, 1888." The painting was exhibited in the Paris Exposition of 1889, when it was awarded a Silver Medal. It was offered for sale at the American Art Galleries in New York on January 29, 1897, and was purchased by Andrew Carnegie. It was presented to the Carnegie Institute in 1897.

The picture may be referred to as a true "salon painting" in that it is large in size and dramatic in conception. Again, it may be termed a salon painting because it was not planned for a home but for exhibition in a spacious gallery. In the picture, a group of peasant women have gathered on the seashore beneath an enormous crucifix to watch for the return of a fishing crew. Most of the gathering are old people, but there is a mother with a young child in arms, and, with the exception of the group on the right in discussion, they are straining their eyes out to sea.

The scene is ominous as if it were the preliminary to Reinhart's painting, *Washed Ashore*. It is a "Lady or the Tiger?" picture, and the crucifix does not help to solve the problem, for it indicates triumph either way. It is a colorful, well organized, and skillfully painted canvas, and as one looks at it today one recalls Henry James's comment on the artist which was almost prophetic:

"The twentieth century, the latter half of it, will, no doubt, have its troubles, but it will have a great compensatory luxury, that of seeing life of a hundred years before much more vividly than we—even happy we—see the life of a hundred years ago. . . . It is doubtless too much, I hasten to add, to ask Mr. Reinhart, for instance, to work to please the twentieth century."

It may be said in answer to Henry James's remarks that the painting, *Awaiting the Absent* does offer humanism and perhaps pleasure to many in the twentieth century, in contrast to "the maimed fantasies and organized frustrations" which Lewis Mumford sees in modern art of the twentieth century.

Charles Stanley Reinhart was born in Pittsburgh in 1844 on what was then Irwin Avenue, now Eighth Street, in the heart of the city. He was related to the patriot



THE ARTIST'S PENCIL SKETCHES FOR FIGURES IN "AWAITING THE ABSENT"

and craftsman, Benjamin Franklin. His boyhood was spent in Sewickley, where he attended the Academy. It is said that he drew from the time he was able to hold a pencil. He was constantly sketching while at work, play, or study. There was artistic talent in the family, for his uncle was Benjamin Franklin Reinhart (1829-85), a historical, genre, and portrait painter, and Charles's brother, Albert Grantley Reinhart (1854-1926), was a portraitist and landscape painter of the Munich School and, in his early days, a student of Frank Duveneck.

Charles Reinhart, when fifteen, entered the office of the Allegheny Valley Railroad as a clerk under the superintendent, Isaac Morley. When the Civil War began, young Reinhart and Thomas M. King were selected to go south to Alexandria, Virginia, to assist in operating the railroads, then under government control. It is said that he entered the corps commanded by Colonel Thomas Alexander Scott, afterwards president of the Pennsylvania. The duty of the corps was the construction and maintenance of railroads for the transportation of Union troops. It was the same Tom Scott who took with him to Washington a young telegraph operator, Andrew Carnegie. In all probability, the clerk and the operator met in Alexandria. It was in Virginia, that long disputed battlefield, that young Reinhart did the groundwork and detail of war sketches that afterwards made him an invaluable member of *Harper's* staff.

At the close of the war Reinhart returned to Pittsburgh to take a position in the office of Hussey, Howe and Company,

and later with Singer, Nimick and Company. But the "madness of art" had seized him. His art training in Pittsburgh consisted of his own sketching and drawing from casts in the School of Design. He went to Paris in 1867, where he spent a year in the Atelier Suisse, and then to Munich to draw in the Royal Academy under Professor Streyhüber and to paint under Professor Otto.

He returned to America and Pittsburgh in 1870 to accept a commission to illustrate schoolbooks. While engaged on this work, he sent a cartoon to *Harper's*, which ultimately led to his departure from his native city and his entrance into the illustration department of the great publishing firm. He was regularly employed by *Harper's* from 1871 to 1877 and rapidly became the most versatile illustrator America has produced. It follows that he was best known as an illustrator rather than painter. He was one of the outstanding artists who created the "Golden Age" of American illustration. In writing of the impetus which American periodical literature had given the art of illustration in black and white, Henry James remarked: "Two or three fine talents in particular have helped it to succeed, and Mr. Reinhart is not the least conspicuous of these."

Reinhart opened his own studio in New York in 1876 because, as he lamented many times, his work as an illustrator gave him no opportunity to paint. That he used his brush as well as his pencil early in his career is indicated by the fact that, while his residence was given as New York, he had two paintings in the Pittsburgh Art Association Exhibition in the winter of



STUDY IN GOUACHE FOR THE PAINTING

1870. In 1880 he went again to Paris, this time to remain for some ten years. It was during this period that he made the sketches in Brittany, the gouache study in Paris, and ultimately the painting, *Awaiting the Absent*. It was while in Paris, too, that he painted *Washed Ashore*, which was in the Salon of 1887; *Rising Tide*, which was purchased by the French Government in 1890; and practically all his important works in oil.

On his return to America he again opened a studio in New York, resumed his work as an illustrator for *Harper's* and several other publications, and continued to paint. In 1891 there was an exhibition of one hundred and fifty-three of his drawings at The Art Institute of Chicago, and at the Paris Exposition in 1900 he was represented by his canvas, *High Tide at Gettysburg*. In 1893 he, with seven fellow artists, collaborated in the decoration of domes at the World's Columbian Exposition. His illustrations and Salon paintings had prepared him for the task. When his final illness came on, he was engaged in making a series of illustrations for General Horace Porter's "War

Papers," to be published in the *Century Magazine*. He died in New York August 31, 1896, and was buried in Allegheny Cemetery, where he rests with many eminent fellow Pittsburghers, among whom not the least is Stephen Collins Foster.

In the catalogue of oil paintings, water colors, and original drawings by Charles Stanley Reinhart at the American Art Galleries in 1897, his fellow artists, many of whom were members of the famous Tile Club, wrote of him: "There is a magnetism about some men that to those who possessed their friendship renders any just analysis well-nigh impossible. Charles Stanley Reinhart had such an individuality, but he combined with rare personal charms a talent so distinctly his own, an observation so keen and discriminating, and in his illustrative work, a technique so well developed, that his place among his professional brethren has long since been established, and today his artistic reputation rests on a firm foundation."

—J. O'C., JR.

Among Our Friends

THE Buhl Foundation has made the third payment of a grant for publication and distribution of *Wildflowers of Western Pennsylvania and the Upper Ohio Basin*.

From the Wherrett Memorial Fund of The Pittsburgh Foundation has come \$6,000 for the Carnegie Library of Pittsburgh to refurbish its Boys and Girls Department.

The Childs Frick Corporation has given \$1,500 to finance this summer's field work in vertebrate fossils. Dr. J. LeRoy Kay leaves early this month for the West. The Museum group will work the Wasatch formation in Colorado and Wyoming, searching especially for *Eohippus* material, then later go to the Canyon Ferry area in Montana, on the Missouri River, for mapping and lithologic studies.

Mrs. Albert Fraser Keister has contributed \$500 to underwrite the appearance of the Bach Aria Group in Lecture Hall this past winter on the American Artist Series.

IN TRIBUTE TO PORTER GARNETT

THERE are still a few people in Pittsburgh who will remember April 7, 1923, the morning when the Laboratory Press at Carnegie Institute of Technology was formally dedicated and the first proof impression was pulled on the hand press by president Thomas S. Baker. The printing thus undertaken was a short poem entitled "Invocation" by John Masefield. The paper, handmade and four hundred and fifty years old, was a blank leaf from a book, *Rationale Divinorum Officiorum* of Durandus, first printed by Gunther Zainer in Augsburg in 1470.

The ceremony connected with this dedication is but one manifestation of the imagination and love for the special that was characteristic of Porter Garnett, master of the Laboratory Press. The purpose in the establishment of this Press, and more particularly Mr. Garnett's concept of it as stated in a report to president A. A. Hamerschlag, was "to familiarize students of printing with those elements of taste, tradition, and technique which constitute the craft known as fine printing." This was to be an elective course for senior students in the school of printing. When the announcement for the opening of the Press came out there were numerous gratifying responses from printers, publishers, paper manufacturers, critics from England and France as well as from the United States.

Thus was established in Pittsburgh a private press emanating from that romantic and intriguing development in the late nineteenth century, the most distinguished exponent of which was probably William Morris and his Kelmscott Press. But the Press at Tech differed from this in its function of teaching.

The motto of the Laboratory Press—nil vulgare, nil pertriti, nil inepti—indicates the uncompromising attitude of its master. The standards herein implied are high and ones which Porter Garnett applied not only to printing but to his entire thinking and living.

Once on its way the Laboratory Press was well equipped with a hand press and other needed material. The choice of printing types was based upon their suitability

for fine work. Among these the most important were Garamond, a modern variation of a French sixteenth-century type; Caslon Old Face preserving the original character of the eighteenth century; and Goudy Antique, a contemporary design based upon the Venetian tradition. Later Lutetia type was added, a beautifully and delicately cut Dutch letter. The Press was also stocked with printers' flowers, ornaments which Mr. Garnett used with originality, grace, and structure. An excellent workable library and a number of original early and later finely printed books were an admirable feature of the Press.

Most of the work of the Laboratory Press was made up, of course, of student projects carried out with advice and criticism from Mr. Garnett, and many of these are delightful examples of the vagaries of the imaginative typophile. But P. G. was a skillful craftsman as well as teacher. One of the most charming and appropriate of his designs was for an allegory, *That Endeth Never*, written as a Christmas greeting for him by Hildegarde Flanner. The design of this little book with the gay italic type and its delicately rhythmic decorations reflects the fantasy of its text and an undeniable femininity of spirit. The delight which Mr. Garnett took in the expression of whimsy and the esoteric is demonstrated in his colophon for this book.

Perhaps the most ambitious publication of the Laboratory Press was *The Fine Book*, a symposium of essays and articles by various critics, artists and craftsmen—Henri Focillon, Lewis Mumford, Paul Valery, Eric Gill, William Morris, T. J. Cobden-Sanderson. Compiled by Porter Garnett to bring to the students' attention significant concepts of the esthetics of bookmaking and fundamentals of fine printing, its purpose also was to acquaint the students with the complexities of book design and printing on the hand press. It embodied a number of unusual and difficult technical problems, especially the handling of printers' flowers for the decorative defining of the various parts of a book. Of this book Ruth Shepard Granniss

has written, "This is not a plea for machine processes versus handwork. A careful reading of the 'symposium' on *The Fine Book*, so beautifully and lovingly printed on the hand press by Porter Garnett and his students of the Laboratory Press, teaches the futility of such a thing."

He was foremost a craftsman. He loved the Laboratory Press, and felt a deep responsibility to his students. He loved to set type. While at a dinner party an idea might come to him for the design of some project and twelve o'clock that night would find him in Room 151, Industries Building, with the sleeves of his dinner jacket rolled up, composing stick in hand, joyously carrying out his idea directly in type.

His personality was a vital and admirable one. His close friend, Dr. Frederick Mortimer Clapp, in writing of him very aptly says: "Porter spent his life trying to uphold high ideals. He did so with knowledge and imagination and lightness. He was no pedant. Neither was he a commonplace craftsman. His knowledge of printing was extraordinary and his taste exquisite and pure." An engaging quality of his was the almost childlike joy he took in what he called the spoof, which he defined as "a more or less elaborately planned and executed joke in that it results in an accretion of pleasure for the spoofee as well as for the spoof." His friends can scarcely think of him without his beloved spoofs.

He has also received enviable formal recognition. Early in his career the French government awarded him the Legion d'Honneur for his splendid work at the University of California in housing a library of modern French books sent to the Panama Pacific Exposition. In 1925 he was invited by the American Institute of Graphic Arts, to serve on the jury of selection and award for the Fifty Books of the Year competition. For two different years he was honorary vice-president of this group. In 1932 they awarded him their



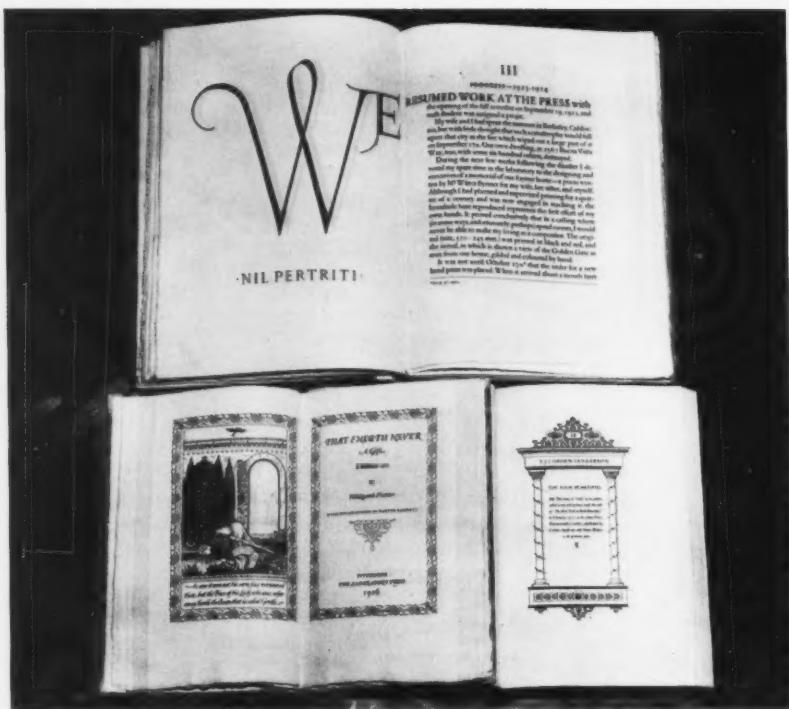
P. G. BESIDE HIS WOOD CARVING, A MEMORIAL TO A FRIEND IN BOHEMIAN GROVE, FORTY MILES FROM SAN FRANCISCO

Gold Medal, the highest honor they bestow. His humility and desire to share his knowledge and taste are illustrated in the enjoyment and pride with which he received in 1931 a joint award with Francis P. Dill, one of his students, from the Limited Editions Club for the best essay on the ideal book.

One of the most beautiful and appealing books ever commissioned by this organization was the *Daphnis and Chloe* designed and printed by Porter Garnett on the hand press in Pittsburgh in 1934. Exquisite in taste, it has been illustrated by Ruth Reeves, the simple and expressive line of her etchings in keeping with the delicate yet forceful design of the type.

In 1928 he began work on the Catalogue for the Frick Collection in New York. This has been described as the "best printing ever done in America." A handsome folio format, it is printed on English handmade paper on the hand press at Pittsburgh, in Lutetia type that was revised in part for this work. The undertaking was planned by Dr. Frederick M. Clapp and represents scholarly research from all over the western world. Recently the first volume was completed under the supervision of Bruce Rogers, one of P. G.'s friends.

Apart from his work in the printing field he had a varied career as a writer and was prominent in the literary activities of the west coast in the '90s and early 1900s. He was dramatic and literary critic for



BOOKS DESIGNED AT THE LABORATORY PRESS BY PORTER GARNETT AND HIS STUDENTS

various San Francisco newspapers and contributed to several magazines, among them *The Lark*. He was also later the associate editor of the *Argonaut*, a literary weekly in its time one of the best in the country.

He was an enthusiastic member of the famous Bohemian Club of San Francisco which had come into being one year after he was born, and he made of their Grove plays a thing apart. He produced several of them with distinction, especially *The Hamadryads* by Will Irwin in 1904, and his own play *The Green Knight* in 1911. He is the author of a number of publications on various subjects reflecting a diversity of interests, knowledge, and taste.

He was responsible for the choice and design of the inscriptions used in the Panama Pacific International Exposition held in San Francisco in 1915. These have been remarked upon as the most distinctive thing of their kind ever done.

In recent years, while living on a ranch in California, Porter Garnett had turned to

carving and has executed a number of pieces in wood revealing an understanding of its inherent esthetic qualities, and, as always, a mastery of the perfectly proportioned letter. To play a little on an old motto as he himself would, it may be said that in his hand the chisel as well as the composing stick is mighty as the pen.

He was a remarkable man whose worth far exceeded any public recognition accorded him. Highly articulate, he expressed and enjoyed the most subtle elegancies of living and nuances of thinking which he shared always with his wife, Edna Foote Garnett. Most especially it can be said of him that he never indulged in the sin of the obvious or of mediocrity.

The world of printing and letters suffered a great loss when on March 20, 1951, one week and a day after his eightieth birthday anniversary, he received his final summons. Surely all his students treasure, as I do, as of inestimable worth the memory of their hours spent with him.—V. L.



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THE NATURALIST'S BOOKSHELF

BY M. GRAHAM NETTING
Assistant Director, Carnegie Museum

PENNSYLVANIA AGRICULTURE AND
COUNTRY LIFE: 1640-1840

BY STEVENSON WHITCOMB FLETCHER.

PENNSYLVANIA HISTORICAL AND MUSEUM COMMISSION.
HARRISBURG, 1950. (\$3.00)

605 PAGES, ILLUSTRATIONS BY S. W. FLETCHER, JR.
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As summer approaches, many city dwellers become infected with the urge to relive the experiences of their pioneer ancestors. Countless thousands, well outfitted and bounteously provisioned, go fishing, hiking, or camping. These pioneers in reverse bear discomfits—poison ivy, pestiferous insects, hard beds—with ill-concealed fortitude, buoyed up by the conviction that only the wheel of time precluded their having been Daniel Boones. Certainly I have no wish to stem this seasonal hegira to the woods; getting back to nature, even in limited fashion, is a restorative unobtainable at a pharmacy. The only point I wish to labor is that our concept of pioneer life is frequently far from accurate.

Until a few weeks ago I harbored the delusion that I had a modicum of knowledge of what conditions and customs had been in Pennsylvania in the early days. I have been humbled in a most rewarding fashion through the reading of *Pennsylvania Agriculture and Country Life*. This fat volume contains such a wealth of material about the first two centuries of settlement in Pennsylvania that it constitutes an invaluable reference for any resident of the Commonwealth interested in local history.

The book is organized into twenty-two chapters; The Land, The Farmers, Pioneer Farming, Labor, Livestock, Transportation, Family Life, The Rural Church are examples of chapter subjects. Each chapter is studded with copious quotations from contemporary writings or later histories, carefully documented in a series of chapter notes preceding the terminal index.

I am always conscious of my inadequacy as a reviewer when I attempt to convey in limited space the flavor and merit of a

compendium. Out of half a hundred marked passages that appealed to me, which half dozen will persuade readers with different interests to delve into the text on their own behalf? I have no formulas to apply, no criteria that are objective. A scientist without these convenient tools of his trade can only flounder unhappily and fall back upon random sampling—as I now do.

Pioneer farmers were dependent upon wildlife for most of their meat supply, yet the plenitude of native animals jeopardized many of their crops. "Herds of buffalo roamed parts of Pennsylvania in pioneer days especially from Lake Erie southward through the valley of the Susquehanna and its tributaries. In the autumn of 1773 a herd of over twelve thousand passed along the west branch of the Susquehanna on the annual fall migration down the Cumberland and Shenandoah valleys."

We should not be haughtily contemptuous of the strange agricultural prejudices of early Pennsylvania farmers; even in these more enlightened days Pennsylvania was one of the last states to provide enabling legislation for soil conservation districts, and there are counties close to Pittsburgh which do not yet have such districts. It is interesting, however, to read of the reluctance of farmers to forsake the wooden plow in the belief that iron poisoned the soil and stimulated weed growth! Even more astonishing was the opposition to potatoes, a crop for which many Pennsylvania soils were eminently suited.

"White potatoes were grown very sparingly, if at all, before 1720. Many people considered them poisonous; it was believed that if a man ate them every day for several days he would not live seven years more. They were thought to be poisonous to livestock, also. This prejudice against the potato, like that against the tomato, persisted many years. In 1819 William Cobbett said, 'Nor do I say that it is filthy to eat potatoes . . . What I laugh at . . . is the cultivation of them

in lieu of wheat . . . I now dismiss the Potatoe with the hope that I shall never again have to write the word or see the thing.' "

Contrariwise, there are many testimonials in these pages to the perspicacity of farmers in finding the causes of some of their crop ills. Wheat rust, then called "blast," affords a good example. "One of the most dreaded scourges of wheat was 'blast,' now known as black stem rust. This first appeared in New England about 1660; by 1700 it was common throughout southeastern Pennsylvania. Blast was attributed variously to 'a vapour breaking out of the earth,' to a 'wind Northeast or Northwest at such times as it flowereth,' to lightning, and to the phase of the moon when the wheat was sown.

"The real cause of 'blast' was discovered by farmers. They observed that wheat grown near wild barberry bushes was most subject to rust and insisted that there was some connection between the two. Scientists laughed at the suggestion . . . John Beale Bordley of Philadelphia was one of the first of the 'learned men' to admit that farmers were right and scientists wrong."

"There were no very edible native species of apple or cherry and none whatever of pear, apricot, and quince; these were introduced from Europe . . . One wild tree fruit, however, was a constant source of pleasure to the housewife and her hungry menfolks. The region about Philadelphia was bountifully supplied with wild peaches. The peach was not native, as John Bartram at first surmised, but was a legacy of Spain. When Spanish adventurers under Menendez founded St. Augustine, Florida, in 1565, they planted peaches. Creek, Choctaw, Cherokee and other southern Indian tribes quickly disseminated them throughout the South; by interchange with friendly tribes they soon were naturalized as far north as Philadelphia and as far west as Arkansas."

The early Quaker, German, and Swedish settlers were as uncompromisingly religious as they were hard-working. It is interesting, therefore, to note how some of their folkways differ from ours today. Stage plays were legally banned but lotteries were generally considered a proper means of fund-raising. The Quakers might have abolished music except for the Bibli-

cal evidence that the Lord permitted ancient Hebrews to sing psalms; the Germans were, in contrast, great music-lovers.

Recreation in the sense we take for granted today was as unknown as temperance. "Visitors to homes of Scotch-Irish, including the minister making a pastoral call, were expected to take a drink of whiskey when they arrived and again when they departed. If the minister made, say ten or twelve pastoral calls a day he was likely to be in a mellow mood by evening. In 1794 Tench Coxe of Philadelphia drew up a plan for a 'Model farm settlement' on the Susquehanna. It called for one grist mill, one brewery, and ten distilleries. By 1800 there were more distilleries in Pennsylvania than grist mills."

"Neighborhood was characteristic of rural Pennsylvania in spite of limitations imposed by the clannishness and prejudices of the several ethnic groups." Its most common expression was in "frolics and bees, in which neighbors assisted one another in necessary work. . . . The apple butter bee or 'boiling' was a favorite diversion of courting couples. A large copper kettle filled with sweet cider was hung on the crane in the kitchen or, if the weather was propitious, over an out-of-door fire. When the cider had boiled down sufficiently, pared, cored and quartered apples were added. Young couples took turns stirring the butter constantly with a long wooden paddle. Those not so employed played kissing games in the house or yard. Many a rural courtship was advanced by apple butter bees." Apparently "country girls did not share the feelings of a prim Philadelphia maiden who confided to her diary, 'One hates to be always kissed, especially as it is attended with so many inconveniences; it discomposes the economy of one's handkerchief, it disorders one's high roll [hair-do], and it ruffles the serenity of one's countenance.' "

Whether or not you join the woodsy set in the summer, *Pennsylvania Agriculture and Country Life* deserves an honored place upon your Pennsylvania bookshelf. It is one of those family books which will be invaluable to theme-writing school children, contest-smitten adults, and argumentative oldsters intent upon documenting their reminiscences.

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